REMARKS

Upon entry of the present amendment, claims 1 and 3-13 will remain pending in the above-identified application and stand ready for further action on the merits.

The amendments made herein to the claims do not incorporate new matter into the application as originally filed. For example, support for the amendment to claim 1 occurs in claim 2 (now cancelled) and in the specification at page 21, line 11 (for upper limit of Froude number). Regarding the amendments to claims 3-4, these amendments simply rewrite claims 3-4 claims into an independent format without narrowing the scope thereof.

It is submitted that the present amendments upon being entered, resolve outstanding issues regarding patentability, such that a notice of allowance should now be allowed to issue.

Provisional Interview Request

Should the present amendment not result in the issuance of a Notice of Allowance, and the Examiner decide to issue a subsequent office action on the merits, the Examiner is requested to contact the undersigned beforehand, at his direct telephone number (703-205-8031), so that an interview may be scheduled and held at the

Examiner's earliest convenience in order to expedite an allowance of the instant application.

Claim Rejections Under 35 USC § 103

Claims 1-9 and 11-13 have been rejected under 35 USC § 103(a) as being obvious over Yamashita et al. '516 (US 5,468,516), and claims 1-13 have been rejected under 35 USC § 103(a) as being obvious over Yamashita et al. '501 (US 5,736,501). Reconsideration and withdrawal of each of these obviousness rejections is respectfully requested based upon the following considerations.

The Present Invention and Its Advantages

As recited in instant claim 1, the present invention is directed to a process for preparing detergent particles. In the processes step (I) a base particle ((a) component) is mixed with a surfactant component ((b) component) under mixing conditions such that the base particle ((a) component) does not substantially undergo breakdown, and wherein the base particle is obtained by spray-drying an aqueous slurry under the following conditions.

> "... wherein a mixing operation is carried out by using a mixer comprising agitation impellers of which mixing impellers have a shape of a paddle, wherein the agitation impellers have a Froude number of from 0.5 to 4, provided where the mixer further comprises disintegration impellers, the mixing operation is carried out under mixing conditions so as not to substantially rotate the disintegration impellers...." *(emphasis added)*

In the processes step (II), the mixture obtained in step (I) is mixed with a fine powder, with substantially maintaining the shape of the ((a) component) containing the ((b) component) to give detergent particles, wherein the detergent particles have a degree of particle growth of 1.3 or less, and a bulk density of 500 g/L or more. (*See claim 1.*)

Accordingly, by way of the present invention there is provided a process for preparing detergent particles in which (i) preparation steps are simplified, (ii) variations in the properties of the detergent particles against variations in the formulated amount of the surfactant composition can be suppressed, (iii) particles can be formulated in large amounts, and (iv) which detergent particles possess excellent flowability. More particularly, by the claimed inventive process, one can obtain detergent particles capable of having a large formulated amount of surfactant, through simplified preparation steps, which particles are excellent in dissolubility and excellent in exudation suppression and anti-caking properties.

Distinctions Over Yamashita et al. '516

The cited Yamashita et al. '516 reference provides a process for producing nonionic detergent granules. In claim 1, step (2), the following recitation occurs:

> "...granulating a mixture obtained in said step (1) by agitating in an agitating mixer provided at the center position thereof with a rotation shaft having an agitation impeller with a clearance between the agitation impeller and an inner wall of the mixer of from 1 to 30 mm, wherein the agitation impeller agitates the mixture at a Froude number of from 1 to 4 to form a layer of said mixture on said inner wall of said mixer so as to increase a bulk density of granules of the mixture, step (2) being carried out for a period of time sufficient to granulate said mixture obtained in said step (1), whereafter step (3) is carried out; and..." *(emphasis added)*

As shown above, in step (2) of claim 1, in Yamashita '516, the adhesion layer of the mixture is formed on the inner wall by granulating a mixture in an agitating mixer provided at the center position with a rotation shaft having an agitation impeller with a given clearance between the agitation impeller and an inner wall of the mixer. This step is a compression and rolling granulation (e.g., see column 7, lines 11-45) so that the base particle would undergo breakdown. Therefore, it is opposite to the mixing conditions as defined in claim 1 of the present application such that the ((a) component) does not substantially undergo breakdown. Accordingly, a degree of particle growth of the thus obtained detergent particles would be rather large in the invention of Yamashita '516, and as such would not fall within the parameters of the instant invention wherein it is specified that the "particles have a degree of particle growth of 1.3 or less". Notably this

parameter is also recited in each of independent claims 3 and 4 of the instant application.

Based upon the above considerations, it is clear that the cited Yamashita et al. '516 patent does not teach or provide for each of the elements recited in the present claims, and completely fails to provide any motivation to those skilled in the art to arrive at the instant invention as claimed, and therefore its disclosure is incapable of rendering the instant invention as recited in each of claims 1 and 3-13 obvious under 35 USC § 103(a).

Distinctions Over Yamashita et al. '501

The cited Yamashita et al. '501 reference is concerned with a method for producing nonionic detergent granules. In the provided process in step (II) a heating granulating step is set forth as described below:

> "...heating the mixture obtained in step (i) at least to either (a) a temperature of not less than a melting point of the obtained mixture of components (i) and (ii) in step (I) or (b) a temperature not less than a melting point of a component having the highest melting point of components (i) and (ii) in step (i) capable of neutralizing said acid precursor of the anionic surfactant in an agitating mixture thereby forming a gelled product containing said nonionic surfactant, and granulating said gelled product which acts as a binder while tumbling the agitating mixture at either of said temperatures thereby increasing a bulk density, to give nonionic detergent granules having a bulk density of from 0.6 to 1.2 g/ml." *(emphasis added)*

Accordingly, in step (II) of the process recited in claim 1 of Yamashita et al. '501, there is provided the step of "granulating said gelled product which acts as a binder". Based on this recited step, it is submitted that the base particle would undergo breakdown and thereby a degree of particle growth would occur in the Yamashita et al. '501 particles that would be greater than the recitation of "1.3 or less" in Applicants' pending independent claims 1, 3 and 4, noted above. Namely, the particles produced by the process of claim 1 of the Yamashita et al. '501 reference would be expected by those skilled in the art to produce a degree of particle growth above 1.3 as recited in the instant independent claims 1, 3 and 4.

Because of the above noted distinction, it is clear that the cited Yamashita et al. '501 reference is incapable of rendering obvious the instant invention as claimed, since it provides no teaching, disclosure or motivation to those of ordinary skill in the art to arrive at the instant invention as claimed.

Accordingly, because neither of the cited Yamashita '516 nor '501 references provide any teachings with regard to controlling the degree of particle growth, and provide no teachings or disclosures which would allow one of ordinary skill in the art to arrive at the instant invention as recited in each of pending claims 1 and 3-13, including all of the limitations thereof, it follows that said references cannot stand as a proper basis for

rejecting any of Applicants' claims 1 and 3-13 under 35 USC § 103 for obviousness, whether such Yamashita '516 and '501 references are considered singularly or in combination.

CONCLUSION

Based upon the amendments and remarks presented herein, the Examiner is respectfully requested to issue a Notice of Allowance, clearly indicating that each of the present claims 1 and 3-13 are allowable at present.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Bailey (Reg. No. 32,881) at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By _____
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JWB/end
1422-0428P

Attachment: Version with Markings to Show Changes Made

(Rev. 02/20/02)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 2 has been cancelled and claims 1,3 and 4 have been amended as follows:

1. (Twice Amended) A process for preparing detergent particles, comprising the steps of:

(I): mixing a base particle for supporting a surfactant((a) component); and 15 to 100 parts by weight of a surfactant composition ((b) component), based on 100 parts by weight of said (a) component, the base particle having an average particle size of from 150 to 500 μm, a bulk density of 400 g/L or more, and a particle strength of 50 kg/cm^2 or more, under mixing conditions such that said (a) component does not substantially undergo breakdown, to give a mixture; wherein said base particle is obtained by spray-drying an aqueous slurry, wherein a mixing operation is carried out by using a mixer comprising agitation impellers of which mixing impellers have a shape of a paddle, wherein the agitation impellers have a Froude number of from 0.5 to 4, provided where the mixer further comprises disintegration impellers, the mixing operation is carried out under mixing conditions so as not to substantially rotate the disintegration impellers, and

(II): mixing the mixture obtained in step (I) with 5 to 100 parts by weight of fine powder, based on 100 parts by weight of

the mixture, with substantially maintaining the shape of (a) component containing (b) component, to give detergent particles, wherein the detergent particles have a degree of particle growth of 1.3 or less, and a bulk density of 500 g/L or more.

3. (Twice Amended) [The process according to claim 1] A process for preparing detergent particles, comprising the steps of:

(I): mixing a base particle for supporting a surfactant ((a) component); and 15 to 100 parts by weight of a surfactant composition ((b) component), based on 100 parts by weight of said (a) component, the base particle having an average particle size of from 150 to 500 μm, a bulk density of 400 g/L or more, and a particle strength of 50 kg/cm^2 or more, under mixing conditions such that said (a) component does not substantially undergo breakdown, to give a mixture; wherein said base particle is obtained by spray-drying an aqueous slurry, wherein [in said step (I),] a mixing operation is carried out by using a mixer comprising agitation impellers of which mixing impellers have a shape of a screw, under mixing conditions wherein the agitation impellers have a Froude number of from 0.1 to 4, and

(II):mixing the mixture obtained in step (I) with 5 to 100 parts by weight of fine powder, based on 100 parts by weight of the mixture, with substantially maintaining the shape of (a) component containing (b) component, to give detergent particles,

wherein the detergent particles have a degree of particle growth of 1.3 or less, and a bulk density of 500 g/L or more.

4. (Twice Amended) [The process according to claim 1] A process for preparing detergent particles, comprising the steps of:

(I): mixing a base particle for supporting a surfactant ((a) component); and 15 to 100 parts by weight of a surfactant composition ((b) component), based on 100 parts by weight of said (a) component, the base particle having an average particle size of from 150 to 500 μm, a bulk density of 400 g/L or more, and a particle strength of 50 kg/cm^2 or more, under mixing conditions such that said (a) component does not substantially undergo breakdown, to give a mixture; wherein said base particle is obtained by spray-drying an aqueous slurry, wherein [in said step (I),] a mixing operation is carried out by using a mixer comprising agitation impellers of which mixing impellers have a shape of a ribbon, under mixing conditions wherein the agitation impellers have a Froude number of from 0.05 to 4, and

(II): mixing the mixture obtained in step (I) with 5 to 100 parts by weight of fine powder, based on 100 parts by weight of the mixture, with substantially maintaining the shape of (a) component containing (b) component, to give detergent particles, wherein the detergent particles have a degree of particle growth of 1.3 or less, and a bulk density of 500 g/L or more.